Jewett, Freeborn

From: Mott, Robert <[redacted]
Sent: Tuesday, December 5, 2017 9:53 AM
To: Muneer, Alie; Todd, Jason
Subject: RE: Exposure questions

Dear Alie,
Here is the modified calculation. I've rearranged the lines and added additional comments which hopefully improve the transparency .

pigment processed per year	12,500,000	
per day	34,247	
average handling loss		1.5%
pigment handling losses per day	514	
Violet 29 per year	500,000	
average production Violet 29 per day	1,370	
average loss of Violet 29 loss to WWTP per day	21	
Limit for Sludge to river from WWTP per day		1,049
WWTP sludge per day dry		28,000
% V29 in sludge per day		0.07%
V29 per day to the river		0.77

Please let me know if there are further questions.
Best regard,

Dr. Robert C. Mott
Manager, Global Regulatory
Sun Chemical Corporation
1506 Bushy Park Rd., Bldg. B11-3
Goose Creek, SC 29445
Tel. [redacted]
Cell [redacted]
Fax: [redacted]
e-mail: [redacted]
http://www.sunchemical.com/

From: Muneer, Alie [redacted]
Sent: Monday, December 4, 2017 1:26 PM
To: Mott, Robert [redacted] Todd, Jason [redacted]
Subject: RE: Exposure questions

Sounds great, thanks.

EPA **Alie Muneer**
U.S. Environmental Protection Agency | Office of Pollution Prevention & Toxics, Risk Assessment Division, Assessment Branch 2 | 1201 Constitution Ave., NW, WJC East Bldg., [redacted] | Washington, DC 20004 | [redacted] | [redacted] | Office hours: M-F, 8am to 4:30pm ET

From: Mott, Robert [redacted]
Sent: Monday, December 04, 2017 1:22 PM
To: Muneer, Alie [redacted] Todd, Jason [redacted]
Subject: Re: Exposure questions

Dear Alie,
I'm running late getting to my Hotel. I'll cal your office when I'm settled into my room.
Best regards,
RCM

Sent from my iPhone

On Dec 1, 2017, at 4:16 PM, Mott, Robert [redacted] wrote:

> Dear Alie,
> I'm sorry, I thought we had already resolved that.
> I'm not with my notes right now, could I send a note this evening and then we could discuss it Monday around 1:30PM if needed?
> Best regards,
> Dr. Robert C. Mott
> Manager, Global Regulatory
> **Sun Chemical Corporation**
> 1506 Bushy Park Rd., Bldg. B11-3
> Goose Creek, SC 29445
> Tel. [redacted]
> Cell [redacted]
> Fax: [redacted]
> e-mail: [redacted]
> http://www.sunchemical.com/
>
> **From:** Muneer, Alie [redacted]
> **Sent:** Friday, December 1, 2017 4:12 PM
> **To:** Todd, Jason [redacted] Mott, Robert [redacted]
> **Subject:** RE: Exposure questions
>
> Hello Robert Mott: Can you pls explain the 0.6 lbs/day PV29 calculation? Thanks, Alie
>
> ---
>
> **<image002.jpg> Alie Muneer**
> **U.S. Environmental Protection Agency | Office of Pollution Prevention & Toxics, Risk Assessment Division, Assessment Branch 2 | 1201 Constitution Ave., NW, WJC East Bldg., [redacted] | Washington, DC 20004 | [redacted] [redacted] Office hours: M-F, 8am to 4:30pm ET**
>
> **From:** Todd, Jason
> **Sent:** Friday, October 06, 2017 9:14 AM
> **To:** Mott, Robert [redacted] Muneer, Alie [redacted]
> **Cc:** Hasan, Jafrul [redacted]
> **Subject:** RE: Exposure questions
>
> Dr. Mott,

I am in the office today. Feel free to call at your convenience, as I'll be at my desk most of the day. If easier, I'm happy to set up a set time as well. Thanks!

Best,
Jason

Jason Todd, Ph.D [redacted]
Risk Assessment Div. / OPPT / USEPA
1200 Pennsylvania Ave., NW / Washington, DC 20460

From: Mott, Robert [redacted]
Sent: Thursday, October 05, 2017 4:54 PM
To: Todd, Jason [redacted] Muneer, Alie [redacted]
Cc: Hasan, Jafrul [redacted]
Subject: RE: Exposure questions
Importance: High

Dear Todd,
I just came across your message in the wrong folder.
Are you available tomorrow morning to discuss your questions?
Best regards,

Dr. Robert C. Mott
Manager, Global Regulatory
Sun Chemical Corporation
1506 Bushy Park Rd., Bldg. B11-3
Goose Creek, SC 29445
Tel. [redacted]
Cell [redacted]
Fax: [redacted]
e-mail: [redacted]
http://www.sunchemical.com/

From: Todd, Jason [redacted]
Sent: Monday, September 25, 2017 2:02 PM
To: Mott, Robert [redacted] Muneer, Alie [redacted]
Cc: Hasan, Jafrul [redacted]
Subject: RE: Exposure questions

Dr. Mott, thank you very much for the information. This is helpful. I am just trying to follow your math in how you get to that 0.6 lb/day value of PV29 and I can't seem to figure out how you're getting to that number.

Your 1,049 lb/d value equates with the reported max allowable load between 2011-2013 on the DMR report of 382,885 lbs/yr (=max allowable load/365) [see table below for data compiled from DMR]. It appears the facility's max allowable load has actually increased since 2014 to a little over 454,000 lbs/yr for 2014-2016 (or ~1246 lbs/d for 2016 numbers). I also see how you're getting that slipping number of 4% (1,049 lbs/d is ~4% of 28,000 lbs/d).

If I'm understanding your written description and you look at the actual reported releases to the river (e.g. 2016: 173,277 lbs/yr or 475 lbs/d) gets you to that 1-2% number (e.g. 475 lbs/d is 1.7% of 28,000 lbs/d) you reference I believe. But I don't see what you used to get to 0.6 lbs/d of PV29. Can you explain how you got to that number? It's probably obvious, but I'm just not seeing the numbers used to arrive at that result. And if we use your given 0.6 lbs/d PV29 released to the river, then that'd equate to ~219 lbs/yr or 0.13% of all TSS releases in 2016 (219 lbs/ 173,277 lbs). Does that seem in line with expectations or logical?

Maybe, since you've now had a chance to look at actual numbers, it would be helpful to state things more equivocally:

1. What I am interested in is what percentage of that reported release of 173,277 lbs/yr of TSS in 2016 is likely composed of PV29? It appears on your previous email and from what I show above that it's a low amount (e.g. <1%), but I'd want verification and clarification from you. Even ballpark percentage numbers would be useful (e.g. <10%?, <5%?, <1%?).
2. The monitoring data is based on a monthly sampling so the facility is obviously producing TSS throughout the year, but do you have a feel for the number of days you're releasing PV29 to the river or producing PV29 over the course of the year? For instance, is PV29 made and released throughout the year or is it made and released over a finite number of days. At the most extreme ends of the spectrum, a company could release all of a chemical to the environment in a single day (high-end) or release it continuously over the entire year (e.g. 365 days, low-end). Again best estimates are useful, if unable to give a specific number of days.

And finally, if there are concerns about sharing of this type of information due to CBI concerns, there are ways such information can be shared to shield that information from our end. Feel free to reach out via phone or email. Thanks and look forward to hearing from you.

Best,
Jason

Reported releases of TSS from DMR:

Table 1. Sun Chemical Bushy Park facility (NPDES: SC0003441) reported annual load release, maximum allowable load, and percent of maximum allowable load released for total suspended solids

Reporting Year	Total Annual Load		Maximum Allowable Load		Percent of Maximum Allowable Load Released
	lbs/yr	kg/yr	lbs/yr	kg/yr	%
2016	173,277	78,597	454,927	206,351	38.1
2015	111,137	50,411	454,589	206,198	24.4
2014	137,401	62,324	454,589	206,198	30.2
2013	102,256	46,383	382,885	173,674	26.7
2012	108,382	49,161	382,885	173,674	28.3
2011	68,385	31,019	382,885	173,674	17.9
2010	96,975	43,987	299,665	135,926	32.4

*The DMR lists annual loads in lbs/yr, but use in EPA model requires kg/yr. Showing both here to ease comparison

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Jason Todd, Ph.D / [redacted]
Risk Assessment Div. / OPPT / USEPA
1200 Pennsylvania Ave., NW / Washington, DC 20460

From: Mott, Robert [redacted]
Sent: Monday, September 25, 2017 11:08 AM
To: Muneer, Alie [redacted]
Cc: Todd, Jason [redacted] Hasan, Jafrul [redacted]
Subject: RE: Exposure questions

Dear Alie,
In my looking at this question I found the attached link which on first blush surprised me. https://echo.epa.gov/effluent-charts#SC0003441/00530 . Upon reflection the 1,049lb/day average for TSS is actually readily understood.

1. Our WWTP generates ~28,000lbs of sludge per day (dry weight), so this is >4% "slipping" through the filter. This is somewhat higher than we experience in the manufacturing of our pigments, where the standard yield loss is 1-2% for the ~12 million pounds processed. I think this is due to our being more careful operating filter presses that isolate pigments than those which are basically capturing biomass. The isolated bio mass is transported to a licensed lined land fill.
2. It seems that the TSS going to the river is 90-95+% bio solids. This leads to PV29 being ~0.6lb/day of a material with a very low aquatic solubility 10µg/L.
3. Our engineering controls capture ~15% (15K pounds per year) of the lost material in our bag houses. This material is then disposed of in a licensed lined line fill. It is estimated that the capture efficiency of our baghouse is >99%. PV29 would be ~4% of this dust handled.

I hope this helps.
Best regards,
Dr. Robert C. Mott
Manager, Global Regulatory
Sun Chemical Corporation
1506 Bushy Park Rd., Bldg. B11-3
Goose Creek, SC 29445
Tel. [redacted]
Cell [redacted]
Fax: [redacted]
e-mail: [redacted]
http://www.sunchemical.com/

From: Muneer, Alie [redacted]
Sent: Friday, September 22, 2017 4:26 PM
To: Mott, Robert [redacted]
Cc: Todd, Jason [redacted]; Hasan, Jafrul [redacted]
Subject: Exposure questions

Hello Robert Mott:

We have a few questions relating to exposure:

2. What are the days of release to surface water for PV29?
3. Do you have any additional information on PV29 air release for occupational exposure and environmental exposure?

Jason Todd/Exposure Assessor may contact you to follow-up via email or may call you.

Thanks, Alie

<image004.jpg> Alie Muneer
U.S. Environmental Protection Agency | Office of Pollution Prevention & Toxics, Risk Assessment Division, Assessment Branch 2 | 1201 Constitution Ave., NW, WJC East Bldg., [redacted] | Washington, DC 20004 | [redacted] | [redacted] | Office hours: M-F, 8am to 4:30pm ET

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